(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 21 October 2004 (21.10.2004)

PCT

(10) International Publication Number WO 2004/089252 A3

(51) International Patent Classification7: G02C 7/02

A61F 2/16,

(21) International Application Number:

PCT/US2004/009737

(22) International Filing Date: 31 March 2004 (31.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 10/403,985

31 March 2003 (31.03.2003)

(71) Applicant (for all designated States except US): BAUSCH & LOMB INCORPORATED [US/US]; One Bausch & Lomb Place, Rochester, NY 14604 (US).

(72) Inventors; and

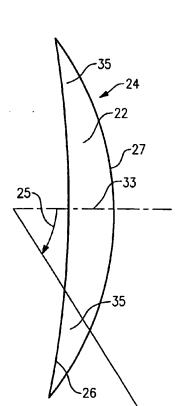
(75) Inventors/Applicants (for US only): GERAGHTY, Edward [US/US]; 30 El Morro, Rancho Santa Marguerita, CA 92688 (US). HOFFMAN, M, Laurent [FR/FR]; Chez M et Mme Hoffman, 14, rue de Saint Ylie, F-39100 Foucherans (FR). NGUYEN, Tuan, Anh [US/US]; 2418 East Karan Lane, Orange, CA 92869 (US).

(74) Agents: MCGUIRE, Katherine et al.; Bausch & Lomb Incorporated, One Bausch & Lomb Place, Rochester, NY 14604 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: ASPHERIC INTRAOCULAR LENS



(57) Abstract: An intraocular lens (24) for placement into the anterior chamber of a human eye having an optic (22) with a central axis (33), an anterior surface (27) and a posterior surface (26). At least one of the surfaces is a rotationally symmetric shaped surface with a center of curvature on the central axis and an 10 aspheric portion (35) formed in a peripheral area of the spherically shaped surface. An attachment mechanism fastens the intraocular lens between the iris and the cornea.



(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

as to the identity of the inventor (Rule 4.17(i)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM,

KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 9 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

PCT/US2004/009737

			PCT/US2004/009737
A. CLASSI IPC 7	FICATION OF SUBJECT MATTER A61F2/16 G02C7/02		
,	have a large and the section of the	niffeeties and fDO	
	o International Patent Classification (IPC) or to both national class SEARCHED	silication and IPC	
	ocumentation searched (classification system followed by classification sy	cation symbols)	
Decumental	tion searched other than minimum documentation to the extent th	est such documente are inclu	in the fields searched
	DON SEALCHEU GUIRT HEALTHINIANN COORTIGINGUUT O DIO GARETE U	et suat agranisins die inde	
Electronic d	ata base consulted during the international search (name of data	base and, where practical,	search terms used)
EPO-In	ternal, WPI Data		
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the	Relevant to daim No.	
X	US 5 019 098 A (MERCIER JEAN-LO 28 May 1991 (1991-05-28)	10-19	
	column 3, line 35 - column 4, l column 6, line 4 - column 6, li	ine 36	j
	column 6, The 4 - column 6, The column 6, The figures 1-3	ine 40;	
X	US 4.277 851 A (CHOYCE DAVID P) 14 July 1981 (1981-07-14))	10
A	column 2, line 3 - column 2, li column 2, line 58 - column 2, l figures 3-5	11-15,17	
A	WO 92/20302 A (WORST JAN GERBEN 26 November 1992 (1992-11-26) page 7, line 10 - page 7, line 1-3,7; figures 4,5,7		10-18
Furt	ner documents are listed in the continuation of box C.	X Patent family n	nembers are listed in annex.
° Special ca	tegories of cited documents :	"T" later document publ	ished after the International filing date
consid	ent defining the general state of the art which is not erred to be of particular relevance	cited to understant invention	not in conflict with the application but I the principle or theory underlying the
filing d		cannot be consider	lar relevance; the claimed invention red novel or cannot be considered to
which i	nt which may throw doubts on priority claim(s) or is cited to establish the publication date of another n or other special reason (as specified)	"Y" document of particu	e step when the document is taken alone lar relevance; the claimed invention
	ent referring to an oral disclosure, use, exhibition or	document is combi	red to involve an inventive step when the ned with one or more other such docu– ination being obvious to a person skilled
"P" docume	ant published prior to the international filing date but an the priority date claimed	in the art.	of the same patent family
	actual completion of the international search		ne international search report
3	O September 2004	08/10/20	004
Name and n	nailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2	Authorized officer	
	European Patent Chice, P.B. 5516 Fatentiaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Merté, 1	3

INTERNATIONAL SEARCH REPORT

PCT/US2004/009737

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. X Claims Nos.: 1-9 because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT — Method for treatment of the human or animal body by surgery; the step "placing an intraocular lens into the anterior chamber" is highly invasive and has to be performed by an ocular surgeon.
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful international Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This international Searching Authority found multiple inventions in this international application, as follows:
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

PCT/US2004/009737

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5019098	. A	28-05-1991	FR DE DE EP JP	2647227 A1 69002386 D1 69002386 T2 0398813 A1 3011315 A	23-11-1990 02-09-1993 13-01-1994 22-11-1990 18-01-1991
US 4277851	A	14-07-1981	GB JP JP JP	1582657 A 1186100 C 54086996 A 58015142 B	14-01-1981 20-01-1984 10-07-1979 24-03-1983
WO 9220302	A	26-11-1992	US AU CA DE DE EP WO	5192319 A 660688 B2 1976392 A 2109590 A1 69215672 D1 69215672 T2 0585362 A1 9220302 A1	09-03-1993 06-07-1995 30-12-1992 21-01-1993 16-01-1997 12-06-1997 09-03-1994 26-11-1992

THIS PAGE BLANK (USPTO)